

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Purpose: In FY01, The NMSF R&D program will consist of two elements: 1) R&D to support specific DNFSB 94-1 issues at the critical sites holding 94-1 materials across the complex and 2) Nuclear Materials issues broader than DNFSB 94-1 scope. The main driver for the program is the safe disposition of nuclear materials to meet 94-1 commitments and enable safe closure of sites around the DOE complex. This driver is codified in various site-specific compliance agreements such as the Hanford Triparty Agreement and the Rocky Flats FFCA, as well as in DOE's Paths to Closure plan and Departmental commitments in the DNFSB 94-1 Implementation Plan. In particular, Los Alamos provides DOE complex-wide support for nuclear materials stabilization and storage associated with 94-1. Los Alamos, as the Lead Laboratory for 94-1 Research and Development, provides the stabilization and storage programs at 94-1 sites with the technical basis for risk-based prioritization, stabilization and storage standards development, stabilization process development, and packaging requirements for safe shipment and storage pending disposition, as well as surveillance during the storage period prior to disposition. As part of the program, Los Alamos executes a core technology effort to improve the technical understanding of stabilization processes and material interactions and behavior during storage, while assuring that technical capabilities are available in the future to deal with any unforeseen problems during storage. Upon completion of the 94-1 stabilization milestones at DOE sites, Los Alamos will continue shelf-life studies, surveillance support, core technology activities, and other appropriate activities to support safe storage prior to disposition. The 94-1 related work is expected to be supported largely by EM60 funding.

In FY01, the technical program also will address nuclear materials issues beyond the scope of DNFSB 94-1. It is anticipated that the non-94-1 work will similarly be funded largely by EM50.

Definition of Scope: A research committee was chartered in 1994 to 1) assess the nuclear materials stabilization and storage program outlined in the original 94-1 implementation plan, 2) formulate an R&D Plan to address the technological and core program needs of the 94-1 program, and 3) prepare task statements defining the R&D work required to accomplish program objectives. The Lead Laboratory R&D activities are structured to implement this R&D Plan, which has been updated annually by the Plutonium Focus Area. The nuclear materials addressed by the 94-1 Implementation Plan include approximately 17T of plutonium in various forms. Minor quantities of materials (approximately 40kg) reside at Los Alamos to support the research activities. Non 94-1 scope includes large quantities of materials that must be dispositioned prior to site closure, but are not within the domain of 94-1. Specific identified 94-1 work scope for FY01 includes the following:

- Long-term Surveillance of Stabilized Materials
- Nuclear Materials Storage Issues/Core Technology
- Materials Identification Documentation
- Moisture Analytical Methods
- Stabilization Process Qualification
- Gas Generation Rates in Shipping Environments
- Flowsheet Development
- Characterization of Alloyed Pu Materials
- Characterization of <30 wt.% Pu Materials

Non 94-1 scope:

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 1 of 19

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Project Description Narratives

- Conversion of classified Materials
- U-233 Management
- Pu Decontamination of U Materials
- Management of CMR TRU/U Materials
- NISS Materials Management
- Nuclear Materials Immobilizations Process

Technical Approach: Critical plutonium stabilization and storage technology and technical information is developed to provide technical support to sites holding nuclear materials which must be dispositioned. The LANL TA55 Plutonium Facility and staff form the core of this effort, along with technical resources throughout the DOE Complex where technically and fiscally appropriate. R/D priorities are established and tracked by frequent interaction with DO-HQ, DOE field offices, site contractors, EM50 Focus Area, a Technical Advisory Panel, and complex-wide technical working groups.

Project Status in FY 2006:

Stabilization technology development, technology transfer, and implementation support activities ramp down in FY00, provided that the sites successfully meet 94-1 milestones. Possible ongoing efforts may include shelf-life studies, surveillance and core technology work to support storage until EM custody ends.

Post-2006 Project Scope:

Shelf-life studies, surveillance and core technology functions will continue as long as EM retains custody of nuclear materials. Additional work may be identified outside 94-1 scope.

Project End State

EM nuclear materials have been stabilized and converted to a form that meets disposal criteria or long-term storage criteria. Inventories have been shipped to a disposal site or Fissile Materials Disposition facility. Project will end when EM no longer has custody of nuclear materials. As per the MD planning case, EM would no longer have custody of the excess nuclear material in 2017.

Cost Baseline Comments:

Baseline activities and costs are closely coupled to Departmental commitments in the DNFSB 94-1 Implementation Plan, site closure plans and associated compliance agreements, the annual DOE 94-1 R&D plan, and the Los Alamos Technical Program Plan that implements the R&D Plan.

Stabilization technology development, technology transfer, and implementation is scheduled to ramp down in FY2000 and beyond, provided that the sites successfully meet 94-1 stabilization milestones. Ongoing efforts will include shelf-life studies, surveillance, and core technology activities directed at the technical basis for safe shipping and interim storage of stabilized materials. Ongoing efforts are expected to be needed as long as EM retains custody of these nuclear materials.

Safety & Health Hazards:

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 2 of 19

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

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Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

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Project Description Narratives

This work involves the safe stabilization, shipping and storage of concentrated U, Pu, Am, and other highly radioactive materials. The safety aspects of these materials is well documented in DNFSB 94-1, Facility SARS, and Vulnerability Studies executed in past years.

Safety & Health Work Performance:

Safe performance of this work is assured by full compliance with the authorization bases at the facilities performing the work.

PBS Comments:

Los Alamos is providing Complex-wide support to DOE for nuclear materials stabilization associated with the Defense Nuclear Facilities Safety Board Recommendation 94-1. Los Alamos is the Lead Laboratory for 94-1 Research & Development, and is providing the stabilization programs at other sites with the technical basis for risk-based prioritization, stabilization standards, stabilization processes, packaging for storage pending disposition, and surveillance during the storage period. The Laboratory is also performing a core technology program to improve our understanding of underlying material interactions, and assuring that technical capabilities are available in the future to deal with any unforeseen problems with materials in storage. This project is the

94-1 Research and Development Lead Lab Support. The DNFSB expressed concern about the safety of nuclear materials left in the manufacturing "pipeline" after the United States halted its nuclear weapons production activities. Part of the 94-1 Recommendation stated, "a research program be established to fill any gaps in the information base needed for choosing among the alternate processes to be used in safe interim conversion of various types of fissile materials to optimal forms for safe interim storage and the longer-term disposition."

Upon completion of the 94-1 milestones at DOE sites, Los Alamos will continue shelf-life studies, surveillance support, core technology activities, and EM Nuclear Materials Stewardship functions. The Nuclear Materials Stewardship Program provides for effective management of nuclear materials for as long as EM retains their custody, and provides an effective interface with the MD program to minimize the time period of EM custody.

A research committee was chartered to accomplish: 1) assess the nuclear materials stabilization program outlined in the implementation plan, 2) formulate an R&D Plan to address the technological and core program needs of the stabilization program, and 3) prepare task statements defining the R&D work required to accomplish program objectives. The Lead Lab R&D activities are structured to implement this R&D Plan. The R&D Plan is updated annually by the Technical Advisory Panel of the Plutonium Focus Area. The Technical Advisory Panel is comprised of site representatives and other technology experts to assure that site needs are adequately addressed by this project. The Plutonium Focus Area also evaluates and funds new proposals and provides peer review of the activities of this project.

Baseline Validation Narrative:

The driver for this program was initially DNFSB Recommendation 94-1. An implementation plan was developed in response and milestones, baselines, and cost data was developed based on DOE's commitment to the implementation plan. Those baselines, milestones, schedules, and cost data have been incorporated into site baselines and regulatory drivers for the field offices.

General PBS Information

Project Validated?	Yes	Date Validated:	9/30/1998
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Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 3 of 19

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

General PBS Information

Has Headquarters reviewed and approved project? Yes

Date Project was Added: 12/1/1997

Baseline Submission Date: 7/1/1999

FEDPLAN Project? No

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	Y	Y	Y	Y	N	Y	Y	Y

Project Identification Information

DOE Project Manager: Roberson, Gary

DOE Project Manager Phone Number: 505-845-5805

DOE Project Manager Fax Number: 505-845-4722

DOE Project Manager e-mail address: groberson@doeal.com

Is this a High Visibility Project (Y/N):

Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
PBS Baseline (current year dollars)	111,108	70,000	181,108	13,888	14,711	14,400	14,100	12,920	12,900	12,000	11,000	10,000	9,000	8,000	7,000
PBS Baseline (constant 1999 dollars)	105,739	53,568	159,307	13,888	14,711	14,400	14,100	12,920	12,561	11,444	10,275	9,149	8,064	7,021	6,017
PBS EM Baseline (current year dollars)	111,108	70,000	181,108	13,888	14,711	14,400	14,100	12,920	12,900	12,000	11,000	10,000	9,000	8,000	7,000
PBS EM Baseline (constant 1999 dollars)	105,739	53,568	159,307	13,888	14,711	14,400	14,100	12,920	12,561	11,444	10,275	9,149	8,064	7,021	6,017

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 4 of 19

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	7,000	7,000	7,000	7,000	35,000	7,000	0	0	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	5,893	5,772	5,653	5,537	26,022	4,691	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	7,000	7,000	7,000	7,000	35,000	7,000	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	5,893	5,772	5,653	5,537	26,022	4,691	0	0	0	0	0	0	0	0	0	0

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project:

Current Projected End Date of Project: 9/30/2016

Explanation of Project Completion Date Difference (if applicable):

The completion of this program is contingent of the MD program and the development of their facilities.

Project Cost Estimates (in thousands of dollars)

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Albuquerque

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Project AL008 / Nuclear Material Facility Stabilization R&D

Report Number: GEN-01b

Print Date: 3/9/2000

HQ ID: 0467

Project Reconciliation

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	132,155	Actual 1997 Cost:	14,711	Actual 1998 Cost:	14,100
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	103,344	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			2,790
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	106,134				

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		The original program extended to 2070. With the development of the MD Mission, the end point moved
Cost Reductions Due to Efficiencies (-):		
Cost Associated with New Scope (+):	24,886	
Cost Growth Associated with Scope Previously Reported (+):		
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	131,020	
Additional Amount to Reconcile (+):	-1	
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	131,019	

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Complete Characterization of PFP, RFETS, & LANL Pu Materials			9/30/1999								
Complete Characterization of SRS Materials			9/30/2001								
Complete Characterization of <30 wt.% Pu Materials			9/30/2002								
Initial long-term Pu Materials Surveillance Experiments on line			9/30/1999								
Complete development and deployment of moisture analytical methods			9/30/2000								
Complete Status Report on Surveillance Experiments			9/30/2001								

Dataset Name: FY 1999 Planning Data

Page 6 of 19

Date of Dataset: 9/20/1999

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Deliver two polycube production units to Hanford			9/30/1999					Y			
Complete stabilization process development for RFETS.			9/30/1999					Y			
Complete LANL engineering support of Hanford polycubes operations			9/30/2000					Y			
Complete process development for all sites.			9/30/2001					Y			
Conduct gas generation workshop			9/30/1999								
Resolve newly identified gas/materials shipping issues			9/30/2000								
Resolve newly identified gas/materials shipping issues			9/30/2001								
Identify/address newly identified long-term storage technical issues			9/30/2000								
Complete final reports on diffusion, alloying, intermetallics, and corrosion process during storage.			9/30/2002								
Resolve outstanding new Pu standard and long-term storage issues.			9/30/1999					Y			
Begin documentation in PBS			1/15/1996								
Project Completion			9/30/2016								
Mission Completion			9/30/2016								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Complete Characterization of PFP, RFETS, & LANL Pu Materials		Y					4	3	3		
Complete Characterization of SRS Materials		Y					4	3	4		

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

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Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Complete Characterization of <30 wt.% Pu Materials		Y					3	5	2		Develop Technical base for Pu containing materials in the 20% to 30% range
Initial long-term Pu Materials Surveillance Experiments on line		Y					3	3	4		Monitor and surveil materials for long term effects of heat and radiology on stabilized materials.
Complete development and deployment of moisture analytical methods		Y					2	3	3		Develop a process to determine the moisture content of a sample.
Complete Status Report on Surveillance Experiments		Y					1	2	2		
Deliver two polycube production units to Hanford							2	1	2		
Complete stabilization process development for RFETS.							3	2	3		
Complete LANL engineering support of Hanford polycubes operations							2	1	2		
Complete process development for all sites.							4	3	4		
Conduct gas generation workshop		Y					1	1	1		
Resolve newly identified gas/materials shipping issues		Y					4	4	5		
Resolve newly identified gas/materials shipping issues		Y					4	4	4		
Identify/address newly identified long-term storage technical issues		Y					4	5	3		
Complete final reports on diffusion, alloying, intermetallics,		Y					3	5	5		

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 8 of 19

Project Baseline Summary Report

Data Source: EM CDB

Report Number: GEN-01b

Operations/Field Office: Albuquerque

Print Date: 3/9/2000

Site Summary Level: Los Alamos National Laboratory

HQ ID: 0467

Project AL008 / Nuclear Material Facility Stabilization R&D

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description			
and corrosion process during storage.														
Resolve outstanding new Pu standard and long-term storage issues.							2	1	1					
Begin documentation in PBS				Y										
Project Completion					Y									
Mission Completion						Y								

Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
Tech.														
Deployed	Ntd	6.00	0.00	6.00					1.00	2.00	3.00			
Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035	Planned 2036 - 2040
Tech.														
Deployed	Ntd													
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total				
Tech.														
Deployed	Ntd								1.00	6.00				

Technology Needs

Dataset Name: FY 1999 Planning Data

Page 9 of 19

Date of Dataset: 9/20/1999

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Site Need Code: AL-07-01-01-SC

Site Need Name: High Explosives (HE) & Barium (Ba) Remediation Of Soils, Surface Water And Groundwater

Focus Area Work Package ID: Pu-03

Focus Area Work Package: Packaging and Storage

Focus Area: PLUTOFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-07-06-03-MW

Site Need Name: Pollution Prevention via Thermal Processing of Materials in Inventory

Focus Area Work Package ID: Pu-03

Focus Area Work Package: Packaging and Storage

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-17-NM

Site Need Name: Development of Performance Objectives for Disposal of Radioactive Sealed Source Devices Meeting the Definition of GTCC-LLW

Focus Area Work Package ID: MW-08

Focus Area Work Package: Facilitating Deployment for Unique Wastes

Focus Area: MWFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 10 of 19

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Technology Needs

Site Need Code: AL-09-01-16-NM

Site Need Name: NEPA Analysis to Support Disposal of Radioactive Sealed Source Devices Meeting the Definition of GTCC-LLW

Focus Area Work Package ID: MW-08

Focus Area Work Package: Facilitating Deployment for Unique Wastes

Focus Area: MWFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-17-Pu-S

Site Need Name: Stress Corrosion Cracking of Stainless Steel in Nitric Acid / Halide Environments

Focus Area Work Package ID: Pu-03

Focus Area Work Package: Packaging and Storage

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-23-Pu-S

Site Need Name: Selective Aqueous Non-invasive Extractions of Low and Medium Fired PuO2 from High Level Wastes, Residues, and Concentrates

Focus Area Work Package ID: Pu-03

Focus Area Work Package: Packaging and Storage

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 11 of 19

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Technology Needs

Site Need Code: AL-09-01-27-NM

Site Need Name: Gas Generation Measurements for Nuclear Material Shipping Environments

Focus Area Work Package ID: Pu-03

Focus Area Work Package: Packaging and Storage

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-28-NM

Site Need Name: Gas Generation Workshop

Focus Area Work Package ID: Pu-03

Focus Area Work Package: Packaging and Storage

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-29-NM

Site Need Name: Separation of Uranium from Plutonium using Ion Exchange Techniques

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

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Report Number: **GEN-01b**

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HQ ID: **0467**

Technology Needs

Related CCP Milestones

Related Waste Streams

Agree?

Change?

: -

Site Need Code: AL-09-01-30-NM

Site Need Name: Long-Term Gas Generation Surveillance for Stabilized Nuclear Materials

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-31-NM

Site Need Name: Consolidation And Safe Storage Of U-233 Nuclear Materials: Reducing Radiation Exposures

Focus Area Work Package ID: Pu-03

Focus Area Work Package: Packaging and Storage

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

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Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 13 of 19

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Technology Needs

Site Need Code: AL-09-01-32-NM

Site Need Name: Nuclear Materials Characterization Documentation

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-33-NM

Site Need Name: CORE SCIENTIFIC R&D CAPABILITY IN SUPPORT OF NUCLEAR MATERIAL MANAGEMENT NEEDS

Focus Area Work Package ID: Pu-03

Focus Area Work Package: Packaging and Storage

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-34-NM

Site Need Name: Materials Identification and Surveillance of <30% Pu Materials

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

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Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 14 of 19

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Technology Needs

Site Need Code: AL-09-01-35-NM

Site Need Name: SRS Plutonium Materials Characterization/Testing

Focus Area Work Package ID: Pu-03

Focus Area: PLUTOFA

Benefits (Cost, Risk Reduction, Both): Both

Focus Area Work Package: Packaging and Storage

Agree with Technology Link: Y

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-36-NM

Site Need Name: Nuclear Materials Deflagration Modelling

Focus Area Work Package ID: Pu-03

Focus Area: PLUTOFA

Benefits (Cost, Risk Reduction, Both): Both

Focus Area Work Package: Packaging and Storage

Agree with Technology Link: Y

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-37-NM

Site Need Name: Nuclear Materials Storage Issues

Focus Area Work Package ID: Pu-03

Focus Area: PLUTOFA

Benefits (Cost, Risk Reduction, Both): Both

Focus Area Work Package: Packaging and Storage

Agree with Technology Link: Y

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Technology Needs

Site Need Code: AL-09-01-38-NM

Site Need Name: Moisture Analytical Methods for Nuclear Materials

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-39-NM

Site Need Name: Nuclear Materials Stabilization Development

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 16 of 19

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Technology Needs

Site Need Code: AL-09-01-40-NM

Site Need Name: Plutonium Materials Stabilization Process Qualification

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-41-NM

Site Need Name: Conversion of Classified Shapes

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-42-NM

Site Need Name: Non-Actinide Sealed Source (NISS) Management

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 17 of 19

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Technology Needs

Site Need Code: AL-09-01-43-NM

Site Need Name: Establishing a Path Forward for Economical Processing of Radioactive Neutron Sources

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-44-NM

Site Need Name: Establishing Beneficial Uses for Radioactive Neutron Sources Destined For Disposal

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: AL-09-01-45-NM

Site Need Name: Management of Radioactive Neutron Sources in Interim Storage

Focus Area Work Package ID: Pu-02

Focus Area Work Package: Stabilization

Focus Area: PLUTOFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Los Alamos National Laboratory**

Project **AL008 / Nuclear Material Facility Stabilization R&D**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0467**

Technology Needs

Technology Deployments

<u>Deployment Status</u>	<u>Deployment Year</u>		
	<u>Planned</u>	<u>Forecast</u>	<u>Actual Date</u>
Technology Name: Polycube Pyrolysis			
Deployment Commitment	1999		
Technology Name: Moisture Analysis Instrumentation			
Deployment Commitment	2000		
Technology Name: Moisture Analysis Instrumentation			
Potential Deployment	2001		
Technology Name: Site specific Pu surveillance support			
Potential Deployment	2001		
Technology Name: Flow sheet development for unusual Pu materials			
Potential Deployment	2001		
Technology Name: Advanced Technology for Stabilization of Pu-238 Contaminated Combustible Waste			
Potential Deployment	2000		

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 19 of 19